**Speaker:** Shai Haran

**Title:** Generalized schemes and Frobenius correspondences

**Abstract:** The usual language of algebraic geometry is not appropriate for Arithmetical geometry: addition is singular at the real prime. We developed two languages that overcome this problem: one replaced rings by the collection of vectors or by bi-operads and another is based on matrices or props. Once one understands the delicate commutativity condition one can proceed following Grothendieck footsteps exactly. The props, when viewed up to conjugation, give us new commutative rings with Frobenius endomorphisms.